

NEW STATE RECORDS AND SEASONAL EMERGENCE PATTERNS OF ALDERFLIES EAST OF THE ROCKY MOUNTAINS (MEGALOPTERA: SIALIDAE)¹

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ABSTRACT: After examination of 3134 adult male alderflies from 25 states east of the Rocky Mountains, 59 state records are noted for 14 species. The emergence patterns ranged from March 4 (*Sialis vagans* from Arkansas) to September 30 (*S. itasca* from Indiana).

Several investigators, including Ross (1937), Townsend (1939), Parfin (1952), Flint (1964), Tennessen (1968), Tarter and Woodrum (1973a, b), Tarter et al. (1976), and Tarter et al. (1977), have reported distributional records and emergence information on alderflies east of the Rocky Mountains. The genus *Sialis* Latreille contains 23 Nearctic species (Ross, 1937); Townsend, 1939; and Flint, 1964).

NEW RECORDS AND EMERGENCE PATTERNS

Fifty-nine new state records of alderflies are noted after the examination of 3134 adult males from 25 states east of the Rocky Mountains. County records are given in parentheses. Emergence patterns are based on these specimens and the work of Ross (1937), Flint (1964) and Tennessen (1968).

Sialis aequalis Banks has been recorded from 6 states (Maryland, New Jersey, North Carolina, Pennsylvania, Virginia, West Virginia) (Ross, 1937 and Tarter and Woodrum, 1973b). The following 6 states represent new records: Connecticut (Fairfield), Delaware (Kent), Minnesota (Itasca), New York, Ohio (Hocking), South Carolina. Thirty-five adults emerged between March 20 (South Carolina) and June 13 (Minnesota).

Sialis americana (Rambur) has been reported from 4 states (Maryland, Ohio, Virginia, Wisconsin) and the District of Columbia (Ross, 1937; Flint, 1964; Tennessen, 1968). The following 6 states are new records: Connecticut (New Haven), Florida (Alachua), Georgia (Wayne), Louisiana (St. James), South Carolina, Texas. Seventeen adults emerged between April 27 (Florida) and July 7 (Virginia).

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Sialis concava Banks has been reported from Maryland, New York and West Virginia (Ross, 1937 and Tarter et al., 1977). New records include North Carolina (Wake) and Virginia. Seven adults emerged between April 24 (Virginia) to June 12 (West Virginia).

Sialis contigua Flint is known only from Virginia (Flint, 1964). One new record is added from Tennessee. Ten adults emerged from April 10 (Tennessee) to May 19 (Virginia).

Sialis dreisbachi Flint is known only from Michigan (Flint, 1964). One new record is recorded from Minnesota. Six adults emerged between May 26 (Minnesota) and June 31 (Minnesota).

Sialis glabella Ross is known only from Illinois (Ross, 1937). Three adults emerged from May 28 to June 16.

Sialis hasta Ross has been recorded for Arkansas, Michigan and Pennsylvania (Ross, 1937 and Flint, 1964). New records are added from Indiana (Ripley) and Missouri. Forty-two adults emerged between April 7 (Arkansas) and May 24 (Michigan).

Sialis infumata Newman has been reported from 10 states (Illinois, Kansas, Kentucky, Michigan, New Jersey, New York, Ohio, Pennsylvania, Virginia, Wisconsin) (Ross, 1937; Townsend, 1939; Flint, 1964; and Tennesen, 1968). New records include Arkansas (Washington), Indiana (Tippecanoe), Minnesota (Lyon), Missouri, North Carolina (Wake) and South Carolina. Sixty-nine adults emerged from March 19 (South Carolina) to September 16 (Kansas).

Sialis iola Ross has been recorded from 5 states (New Hampshire, New Jersey, New York, Pennsylvania, Virginia) and the District of Columbia (Ross, 1937 and Flint, 1964). Five new records include Connecticut, Maine, North Carolina (Wake), Ohio (Champaign, Miami) and South Carolina. Thirty-five adults emerged between April 1 (North Carolina) and July 7 (Maine).

Sialis itasca Ross has been reported from 14 states (Georgia, Illinois, Kansas, Maryland, Michigan, Minnesota, Missouri, New York, North Dakota, Ohio, Pennsylvania, Virginia, West Virginia, Wisconsin) and the District of Columbia (Ross, 1937; Flint, 1964; Tennesen, 1968; and Tarter et al., 1976). The following 7 states represent new records: Arkansas (Craighead), Indiana (Monroe, LaGrange), Minnesota, North Carolina (Chatham, Wake), Oklahoma, Tennessee (Shelby) and Texas (Brazos). Seventy-seven adults emerged from March 27 (Texas) to September 30 (Indiana).

Sialis joppa Ross has been reported from 10 states (Illinois, Maine, Maryland, New Hampshire, New York, North Carolina, Ohio, Pennsylvania, Virginia, West Virginia) (Ross, 1937; Flint, 1964; and Tarter and Woodrum, 1973a). New records include Connecticut (New Haven), Delaware, Louisiana (St. James), Michigan (Cheboygan), Vermont (Orleans) and Wisconsin (Ozaukee). Thirty-seven adults emerged from April 17 (Ohio) to July 10 (New Hampshire).

Sialis molri Ross has been recorded from 14 states (Arkansas, Connecticut, Illinois, Indiana, Kentucky, Massachusetts, Michigan, Minnesota, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, Wisconsin) (Ross, 1937 and Flint, 1964). Six new records include Kansas (Douglas), Maine, Missouri, New Hampshire, Rhode Island and Tennessee (Lake, Shelby). One-thousand and seventy adults emerged between March 19 (Arkansas) and July 24 (Michigan).

Sialis nina Townsend is known only from Kentucky (Townsend, 1939). The adults were collected on April 1.

Sialis rotunda Banks, generally a western species, has been recorded for Oregon and Washington (Ross, 1937). One male was collected near Quinalt Creek in Wisconsin on July 8, 1960.

Sialis spangleri Flint is known only from Maryland (Flint, 1964). One male emerged on May 16, 1963.

Sialis vagans Ross has been recorded for 13 states (Connecticut, Georgia, Illinois, Indiana, Maine, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Pennsylvania, Virginia, Wisconsin) (Ross, 1937 and Flint, 1964). Additional records include Arkansas (Greene), Minnesota (Pine, Itasca), Mississippi (Amite, Lincoln), North Carolina (Wake), Ohio (Summit, Gallia) and Vermont. One-hundred and eighty-eight adults emerged between March 4 (Arkansas) and July 19 (New York).

Sialis velata Ross has been reported from 15 states (Illinois, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, North Dakota, Texas, Virginia, West Virginia, Wisconsin) and the District of Columbia (Ross, 1937 and Townsend, 1939). New records are noted for Nebraska, North Carolina, Tennessee (Marion) and Vermont. Upon examination of 1536 adults, the adults emerged from April 2 (Kansas) to September 5 (Michigan).

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REFERENCES

- Flint, O.S. Jr. 1964. New species and new state records of *Sialis* (Neuroptera: Sialidae). Ent. News 75(1):9-13.
- Parfin, S.I. 1952. The Megaloptera and Neuroptera of Minnesota. Amer. Midl. Nat. 47(2):421-434.
- Ross, H.H. 1937. Studies of Nearctic aquatic insects. I. Nearctic alderflies of the genus *Sialis* (Megaloptera: Sialidae). Bull. Ill. Nat. Hist. Surv. 21(3):57-78.
- Tarter, D.C. and J.E. Woodrum. 1973a. First record of the alderfly, *Sialis joppa* Ross (Megaloptera: Sialidae), in West Virginia. Proc. W. Va. Acad. Sci. 45(2):165-167.
- _____. 1973b. Distribution and new record of the alderfly *Sialis* (Megaloptera: Sialidae) in West Virginia. Ent. News 84:147-148.
- _____, D.L. Ashley, and C.K. Lilly. 1976. New record of the alderfly, *Sialis itasca* Ross, for West Virginia (Megaloptera: Sialidae). Ent. News 87(1/2):32.
- _____, W.D. Watkins, M.L. Little, and D.L. Ashley. 1977. New state record of the alderfly *Sialis concava* Banks from Cranberry Glades, West Virginia. Ent. News 88(3/4):104.
- Tennessen, K.J. 1968. Four new species records of *Sialis* (Megaloptera: Sialidae) for Wisconsin. Wisc. Acad. Sci. 53:185-186.
- Townsend, L.H. 1939. A new species of *Sialis* (Megaloptera: Sialidae) from Kentucky. Proc. Ent. Soc. Wash. 41(7):224-226.

**INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE
ANNOUNCEMENT**

A.N.(S.) 106

The required six months' notice is given of the possible use of plenary powers by the International Commission on Zoological Nomenclature in connection with the following names listed by case number: (see *Bull. Zool. Nom.* 35, part 1, 31 July, 1978).

- 680 *Blatta germanica* Linnaeus, 1767 (Insecta, Dictyoptera, Blattodea); proposal to conserve and to designate it as type-species of *Blattella* Caudell, 1903.
- 2143 Proposal to conserve the specific name *tenebricola*, as published in *Linyphia* by Wider, 1834, but in the sense of Kulczynski, 1887 (Arachnida).
- 2213 HESPERIIDAE Latreille, 1809 (Insecta, Lepidoptera): request for addition to the Official List.

Comments should be sent in duplicate (if possible within six months of the date of publication of this notice in *Bull. Zool. Nom.* 35, part 1), citing case number to:

R.V. Melville, The Secretary, International Commission on Zoological Nomenclature, c/o British Museum (Natural History), Cromwell Road, LONDON, SW7 5BD, England.

Those received early enough will be published in the *Bulletin of Zoological Nomenclature*.